Research Note

DOT HS 810 686

December 2006

EXHIBIT_

Alcohol-Related Fatalities and Fatality Rates by State, 2004-2005

Rajesh Subramanian

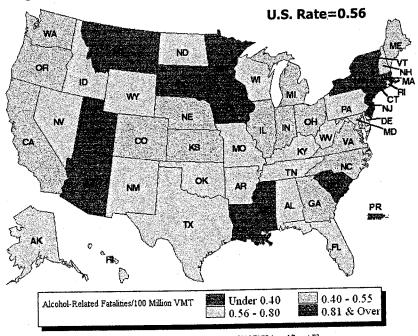
Summary

In 2005, while the overall fatality rate increased marginally to 1.45 from 1.44 fatalities per 100 million vehicle miles of travel (VMT) in 2004, the alcohol-related fatality rate declined to 0.56 from 0.57 fatalities per 100 million VMT. The fatality rate in crashes involving at least one driver or motorcycle operator who had a blood alcohol concentration (BAC) of .08 or above - the illegal per se level in all States -- declined to 0.43 in 2005 from 0.44 fatalities per 100 million VMT in 2004. In 2005, the alcohol-related fatality rate per 100 million VMT declined from 2004 in a total of 25 States and Puerto Rico and remained flat or increased in 25 States and the District of Columbia. The fatality rate in crashes involving at least one driver or motorcycle operator who had a BAC of .08 or above declined in 23 States and Puerto Rico, and remained flat or increased in 27 States and the District of Columbia.

Results

The note uses the 2004 Final and 2005 Annual Report File (ARF) of NHTSA's Fatality Analysis Reporting System (FARS) as well as the VMT data that were released by the FHWA in November 2006 to compute the rate of alcohol-related fatalities. Estimates of alcohol involvement are generated using BAC values reported to FARS and imputed BAC values when they are not reported. Fatalities are alcohol-related if they occur in crashes involving at least one driver, motorcycle operator, pedestrian, or pedalcyclist with a BAC of .01 or above. Also, since most impaired-driving laws target drivers and motorcycle operators, fatalities that occur in crashes that involve at least one driver or motorcycle operator with a BAC of .08 or above are also presented. Figure 1 maps the rate of alcohol-related fatalities per 100 million VMT for each State in 2005. The States are color coded as to whether their rates are at or above (yellow, red) the national rate of 0.56 or below (blue, green).

Figure 1: Alcohol-Related Fatalities Per 100 Million VMT by State, 2005

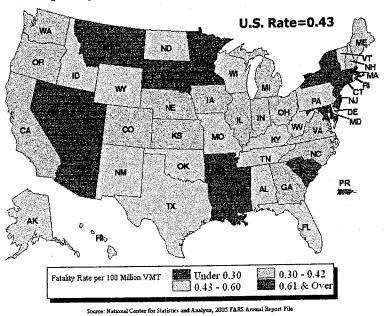


Source: National Center for Statistics and Analysis, 2005 FARS Annual Report File

Figure 2 maps the rate of fatalities in crashes that involved at least one driver or motorcycle operator with a BAC of .08 or above.

The States are color coded as to whether their rates are at or above (yellow, red) the national rate of 0.43 or below (blue, green).

Figure 2: Fatalities Per 100 Million VMT in Crashes Involving at Least One Driver or Motorcycle Operator With a BAC of .08 or Above, by State, 2005



As shown in the Table 1, in the 25 States that showed a decrease in their alcohol-related fatality rates, there were 642 fewer alcohol-related fatalities in 2005. This however, was offset by an increase of 609 fatalities for the 25 States and the District of Columbia that showed an increase in their alcoholrelated fatality rate in 2005. In crashes involving at least one driver or motorcycle operator with a BAC of .08 or above, the 23 States had 593 fewer fatalities which were offset by an increase of 439 fatalities in the 27 States and the District of Columbia where the rate was flat or higher in 2005 as compared to 2004.

2005 Rates as compared to	Alcohol-Rela	ted Fatalities	Fatalities in Crashes Involving at Least One Driver/Motorcycle Operato with BAC=.08+			
2004 Rates	Number of States	Change in Fatalities	Number of States	Change in Fatalities		
States with Higher/Flat Rates	25 + D.C.	+609	27 + D.C.	+439		
States with Lower Rates	25	-642	23	-593		
u.s.		-34	-	-154		

Table 2 (overleaf) depicts the number and rate of fatalities per 100 Million VMT in all crashes, alcohol-related crashes and

crashes that involved at least one driver or motorcycle operator had a BAC of .08 or above.

Table 2: Total, Alcohol-Related Fatalities, Fatalities in Crashes Involving at Least One Driver/Motorcycle Operator with a BAC of .08 or Above and the Corresponding Fatality Rates per 100 Million VMT, 2004-2005

		2004						2005					
State	Tot	Total		Alcohol-Related		In Crashes Involving at least one Driver /MC Operator with BAC=.08+		Total		Alcohol-Related		In Crashes Involving at least one Driver /MC Operator with BAC=.08+	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate: .	Number	Rate	
Alabama	1,154	1.95	432	0.73	360	0.61	1,131	1.90	423	0.71	358	0.0	
Alaska	101	2.02	31	0.62	27	0.54	72	1.43	35	0.70	27	0.	
Arizona	1,151	2.01	446	0.78	334	0.58	1,177	1.97	49 2	0.82	362	0.0	
Arkansas	703	2.22	264	0.83	201	0.64	648	2.03	233	0.73	195	0.	
California	4,120	1.25	1,667	0.51	1,179	0.36	4,329	1.31	1,719	0.52	1,250	0.:	
Colorado	667	1.45	265	0.58	200	0.44	606	1.26	244	0.51	198	0	
Connecticut	294	0.93	131	0.41	112	0.35	274	0.87	120	0.38	91	0	
Delaware	134	1.44	51	0.55	39	0.42	134	1.41	66	0.69	53	0.	
District of Columbia	43	1.15	19	0.51	13	0.35	48	1.29	26	0.70	17	0.	
Florida	3,244	1.65	1,244	0.63	886	0.45	3,543	1.76	1,471	0.73	1,023	0.	
region and the second of the second second	The Printer Strate of the American	1.44	536	0.47	403	0.35	1,729	1.52	545	0.48	413	0.3	
Georgia	1,634	1.46	64	0.66	44	0.45	140	1.39	71	0.70	53	0.	
Hawaii	142	rippettoritaviaeut, areiterini	93	0.63	76	0.52	275	1.85	89	0.60	82	0.	
Idaho	260	1.77	and the second second section in	e in a second constitution of	475	0.44	1,361	1.26	580	0.54	440	0.	
Illinois	1,355	1.24	613	0.56	atikog partikationskerer in en	(1) 医克勒特氏征 (1) 医克勒特氏征 (1) 医克勒特氏征 (1)	938	1.31	320	0.45	253	0.	
Indiana	947	1.30	304	0.42	241	0.33	allow in universe so form \$7750.	1.45	118	0.38	96	0.	
Iowa	388	1.23	111	0.35	87	0.28	450	1.44	151	0.51	115	0.	
Kansas	459	1.57	139	0.48	113	0.39	428	er i carrosaredado como	313	0.51	246	0.	
Kentucky	964	2.04	307	0.65	256	0.54	985	2.08	at the Measurement of Guerran ele-	0.88	309	0.	
Louisiana	927	2.08	424	0.95	315	0.71	955	2.12	394	Construction and the first explicit	309 49	o. 0.	
Maine	194	1.30	70	0.47	57	0.38	169	1.13	59	0.40	application and a second second residence	o. 0.	
Maryland	643	1.16	286	0.52	211	0.38	614	1.09	235	0.42	161		
Massachusetts	476	0.87	207	0.38	169	0.31	442	0.80	171	0.31	134	0.	
Michigan	1,159	1.12	431	0.42	329	0.32	1,129	1.09	421	0.40	312	0.	
Minnesota	567	1.00	191	0.34	156	0.28	559	0.98	201	0.35	163	. O.	
Mississippi	900	2.28	352	0.89	312	0.79	931	2.21	371	0.88	302	0.	
Missouri	1,130	1.64	460	0.67	369	0.53	1,257	1.83	515	0.75	398	0.	
Montana	229	2.04	105	0.94	97	0.87	251	2.26	124	1.11	105	. 0.	
Nebraska	254	1.32	92	0.48	74	0.39	276	1.43	91	0.47	76	0.	
Nevada	395	1.95	154	0.76	112	0.55	427	2.06	159	0.77	126	0.	
New Hampshire	171	1.26	59	0.44	51	0.38	166	1.24	60	0.45	54	0.	
New Jersey	723	0.99	270	0.37	185	0.25	7 4 8	1.01	263	0.36	180	0.	
the result the Tell All the Service arm in the G	521	2.18	213	0.89	157	0.66	488	2.04	189	0.79	143	0.	
New Mexico	ed to a circuit difference persons made	2.16 1.08	594	0.43	435	0.32	1,429	1.04	524	0.38	358	0.:	
New York	1,495	ericki, erickassisser (Straffer	549	0.57	423	0.44	1,534	1.51	549	0.54	414	0.	
North Carolina	1,573	1.64	Sandanga ang Karasa radiya a san	er and meaning and entrance	723 34	0.45	123	1.62	58	0.77	45	0.	
North Dakota	100	1.32	39	0.51	and a second of the second second	0.35	1,323	1.20	505	0.46	385	0.	
Ohio	1,286	1.15	492	0.44	392	Contract to the second contract to the	form the contract of the contr	1.71	283	0.60	231	0.	
Oklahoma	774	1.67	282	0.61	225	0.48	802	1.38	177	0.50	121	0	
Oregon	456	1.28	COMMUNICATION OF PRINCIPAL	0.57	150	0.42	488	emiliar and statistical and	MONEY CONTRACTOR CONTRACTOR	0.59	523	0.	
Pennsylvania	1,490	1.38	Charles and Charles and Charles	0.57	517	0.48	1,616	1.50	636	0.52	29	0.	
Rhode Island	83	0.98	Paragraph Anna Carlo Control C	0.51	38	0.45	87	1.05	43	Late Control Control Control Control	Supplied production of the program of the second	0.	
South Carolina	1,046	2.11	463	0.93	368	0.74	1,093	2.21	464	0.94	359	Section Control (Control (Cont	
South Dakota	197	2.24	83	0.94	71	0.81	186	2.22	80	0.95	69	0.	
Tennessee	1,339	1.89	542	0.76	439	0.62	1,270	1.79	464	0.66	371	0.	
Texas .	3,699	1.60	1,704	0.74	1,336	0.58	3,504	1.49	1,569	0.67	1,224	0	
Jtah	296	1.20	and the second second second	0.3	67	0.27	282	1.12	37	0.15	33	0.	
/ermont	98	1.25	 L. Saur research a procedu. Most 	0.41	20	0.25	73	0.95	29	0.38	28	0	
/irginia	922	1.17	tal Bear saled and rate of a	0.46	288	0.37	947	1.18	347	0.43	263	0	
Washington	567	1.02	Service House and Child	0.44	202	0.36	647	1.17	294	0.53	235	. 0	
West Virginia	410	2.02	British are provided as a con-	0.7	108	0.53	374	1.82	126	0.61	108	0	
sar en la mantena li Guerra de la recentación de la companya del companya del companya de la com	792	1.31	remain and service and residence.	0.59	297	0.49	815	1.36	369	0.61	313	0	
Wisconsin	er Change Capacitation of the Change of the	1.31 1.77	221 1 2 27 24 24 24 24 24 24 24 24 24 24 24 24	0.59 0.64	51	0.55	170	1.88	65	0.72	54	0	
Wyoming	164	rapara na urawa se titu da sia	worders represent the GMM of	Northwest Auto Control (Control Control Contro	Version a participation of the	0.44	43,443	1.45	16,885	0.56	12,945	Ō	
U.S.	42,836	1.44	Albert State State of the residence of the	0.57	the first first for the second of	0.89	453	2.33	217	1.12	145	0.	
Puerto Rico	495	2.54	250	1.28	1/4		for New Yo						

Conclusions

In 2005, the alcohol-related fatality rate declined to 0.56 fatalities per 100 million VMT from 0.57 fatalities per 100 Million VMT in 2004. Impaired-driving laws have been enacted in all 50 States and the District of Columbia which makes it illegal for a driver or a motorcycle operator with a BAC of .08 or above to drive a vehicle. The fatality rate in crashes that involved at least one driver or motorcycle operator with a BAC of .08 or above also declined from 0.44 fatalities per 100 million VMT in 2004 to 0.43 fatalities per 100 million VMT in 2005. In 2005, Montana had the highest alcoholrelated fatality rate in the Nation - 1.11 per 100 Million VMT while Utah had the lowest rate in the Nation - 0.15 per 100 million VMT. In 2004, Louisiana had the highest rate of alcohol-related fatalities in the Nation - 0.95 fatalities per 100 million VMT; while Utah had the lowest rate - 0.30 fatalities per 100 million VMT. In crashes involving at least one driver or motorcycle operator with a BAC of .08 or above in 2005, Montana had the highest fatality rate -- 0.94 fatalities per 100 million VMT; while Utah had the lowest fatality rate - 0.13 fatalities per 100 million VMT. Correspondingly, in 2004, Montana had the highest rate - 0.87 per 100 million VMT; while New Jersey and Vermont had the lowest rate - 0.25 fatalities per 100 million VMT.